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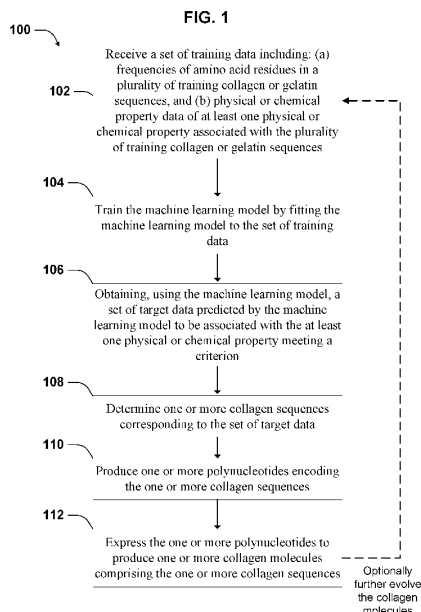
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(54) Title: METHODS AND SYSTEMS FOR ENGINEERING COLLAGEN



(57) Abstract: This disclosure describes methods and systems for engineering and manufacturing collagen-based biomaterials. The methods and systems combine synthetic biology, fermentation, material science and machine learning. Collagen molecules or collagen based materials obtained from using the methods have desired physical or chemical properties such as melting temperature, stiffness, or elasticity. The obtained collagen molecules and sequences are also disclosed.

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